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# *Alyssum misirdalianum* (Brassicaceae), a New Species from Southern Turkey

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**ABSTRACT.** A new species, *Alyssum misirdalianum* Orcan & Binzet (Brassicaceae), is described from southern Anatolia, Turkey. The new species is restricted to southern Anatolia, in the southern part of Mersin Province. The morphological characters (oblanceolate leaves, obovate and glabrous petals, and ovate siliculae,  $6-7 \times 3-4.5$  mm) support its placement in *Alyssum* L. sect. *Gamosepalum* (Haussknecht) Dudley, and the species appears to be most closely related to *A. corningii* Dudley.

**Key words:** *Alyssum*, Brassicaceae, IUCN Red List, Turkey.

The genus *Alyssum* L. (Brassicaceae) includes 89 species in the area covered by the *Flora of Turkey and the East Aegean Islands* (Dudley, 1965). Later studies have added new records (Dudley et al., 1997; Orcan, 1999; Orcan & Mısırdalı, 2000; Ünal & Behçet, 2003; Orcan & Binzet, 2006) and new species (Aytaç & Duman, 2000; Orcan, 2005) to this total. Including the new species described here, the total number of *Alyssum* species in Turkey is increased to 97.

In 2002, a new specimen of *Alyssum* was collected with fruit in the plateau of Fındıklı (Mersin Province) in Turkey. After research of the literature (Dudley 1964a, b, 1965; Ball & Dudley, 1996) and comparison of the new material with *Alyssum* specimens deposited at ANK, GAZI, HUB, and the herbarium of Mersin University, we determined that the new specimens were different from all other Turkish specimens and should be described as a new species.

***Alyssum misirdalianum* Orcan & Binzet, sp. nov.**

TYPE: Turkey. Mersin Prov.: Fındıklı, Deve Koyağı, 1800 m, stony slopes, 30 June 2002, N. Orcan 500 (holotype, ANK; isotypes, GAZI, MO). Figure 1.

Haec species *Alyssum corningii* Dudley affinis, sed ab eo caule 10–20 cm (non 7–12 cm) alto, foliis oblanceolatis (non lineari-lanceolatis), petalis obovatis glabris (non late spathulatis et sparse stellatis) atque fructibus ovatis  $6-7 \times 3-4.5$  mm sparse stellatis (non orbiculari-ovatis  $3.5-4 \times 2.5-3.5$  mm dense stellatis) differt.

Suffruticose, strongly branched perennial; stems erect, 10–20 cm; indumentum dimorphic with 6- to 10-rayed stellate hairs; lepidote hairs ca. 0.25 mm diam. Leaves  $5-15 \times 2-3$  mm, oblanceolate, obtuse or slightly acute, with stellate and lepidote hairs, decreasing in size upward. Inflorescence congested, fruiting raceme elongated, 2–5 cm. Flowers with sepals 3–3.5 mm, ovate, apex acute, margins membranous, with a tuft of long, divergently rayed, stellate hairs at the apex, sepals deciduous in fruit; petals 4–5 mm, obovate, rotund or truncate, glabrous, constricted below the limbs, claws denticulate; filaments of long stamens 3–3.5 mm, with connate or free appendages, ca. 1.5–2 mm; filaments of short stamens 2–2.5 mm, with connate appendages up to 1.5 mm; styles 2–3 mm, with sparse stellate hairs in the lower half. Siliculae  $6-7 \times 3-4.5$  mm, ovate, truncate-emarginate, with sparse stellate hairs ca. 0.25 mm diam.; seeds ca. 1.5 mm, ovoid, brownish green, narrowly winged.

**Distribution and habitat.** *Alyssum misirdalianum* inhabits stony slopes at an altitude of ca. 1800 m. It is endemic to Mersin Province, Turkey, where it is only known from the type locality.

**IUCN Red List category.** *Alyssum misirdalianum* is endemic to southern Anatolia, in the Mediterranean region. The specimens were collected in Mersin Province (C5), and the new species is known only from the type locality in an area of approximately 200 km<sup>2</sup>. The population is not in good condition and therefore should be regarded as Endangered (EN) according to IUCN Red List criteria (IUCN, 2001).



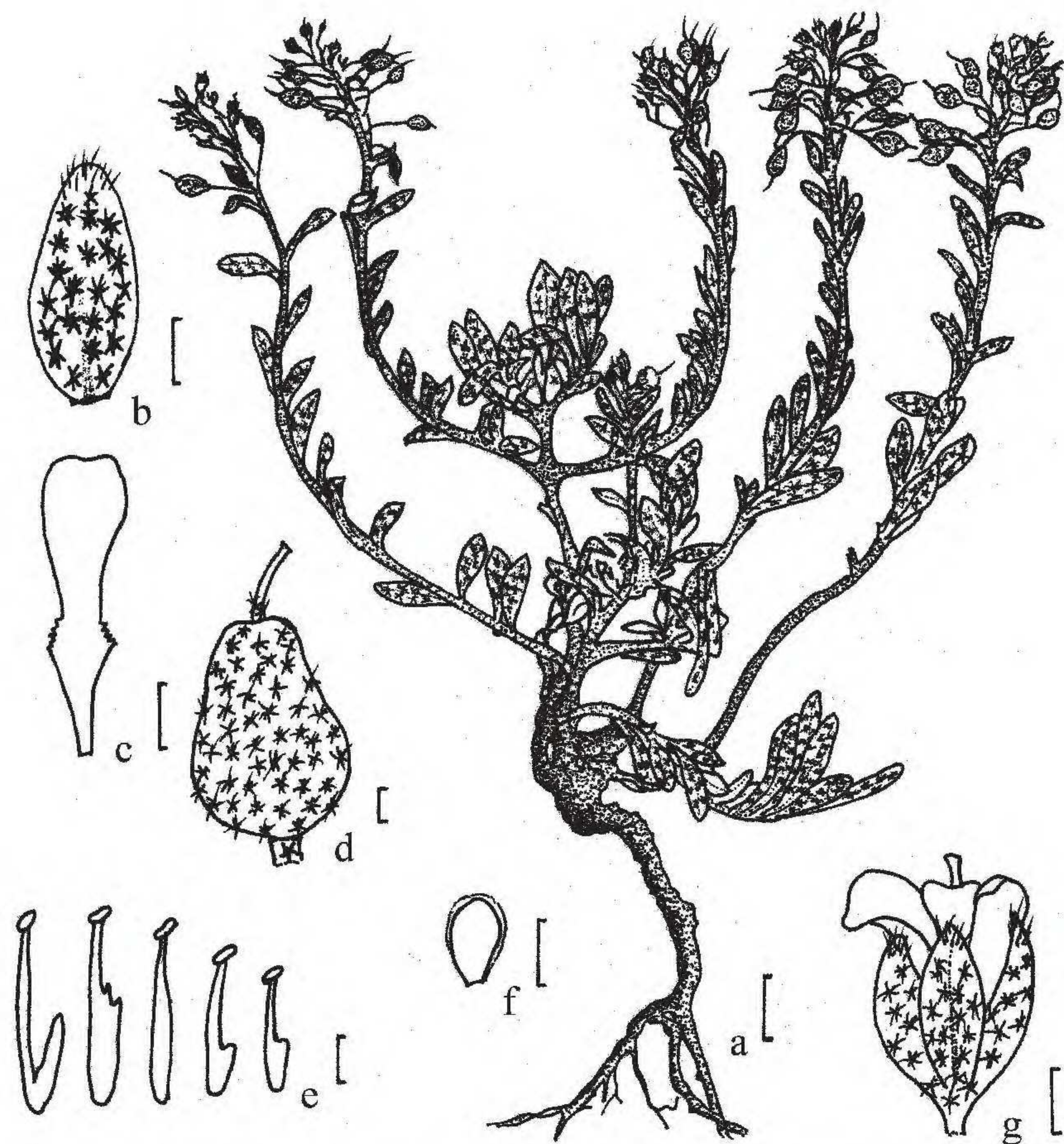


Figure 1. *Alyssum misirdalianum* Orcan & Binzet. —a. Habit. —b. Sepal. —c. Petal. —d. Fruit. —e. Stamens. —f. Seed. —g. Flower. Scale bars: a = 1 cm, b–g = 1 mm. Drawn from the holotype N. Orcan 500 (ANK).

*Phenology.* The new species is known to flower in May and June and to fruit in June and July.

*Etymology.* It gives us great pleasure to name the new species after Hüseyin Mısırdalı, who was Nermin Orcan’s supervisor during her Ph.D. study.

*Discussion.* *Alyssum misirdalianum* should be placed in section *Gamosepalum* (Haussknecht) Dudley

because of its perennial habit, dimorphic sepals, and 2-ovulate locule. *Alyssum tetrastemon* Boissier, *A. thymops* (Huber-Morath & Reese) Dudley, *A. baumgartnerianum* Bornmüller, *A. corningii* Dudley, and *A. lycaonicum* (O. E. Schulz) Dudley, which are distributed in southern Turkey, also belong to section *Gamosepalum*. *Alyssum misirdalianum* is closely related to *A. corningii*, but can be distinguished by

Table 1. Morphological comparison of *Alyssum misirdalianum* with the related species *A. corningii* in Turkey.

<i>A. misirdalianum</i>		<i>A. corningii</i>
Stem length (cm)	10–20	7–12
Leaf blade	5–15 × 2–3 mm, oblanceolate, obtuse or acute	6–10 × 0.5–2.5 mm, linear-lanceolate, acute
Sepals	ovate	ovate-lanceolate
Petals	obovate, rotund or truncate, glabrous	broadly spatulate, entire or subretuse, with sparse hairs on claws
Siliculae	6–7 × 3–4.5 mm, ovate, with sparse stellate hairs	3.5–4 × 2.5–3.5 mm, orbicular-ovate, with dense stellate hairs
General distribution	South Anatolia (C5)*	Central Anatolia (B4, B5, C4, C5)*

\*Regional designations per *Flora of Turkey*.



its oblanceolate leaves (vs. linear-lanceolate), ob-ovate, rotund or truncate, and glabrous petals (vs. broadly spatulate, entire or subretuse, with sparse hairs on claws), and ovate silicula, 6–7 × 3–4.5 mm (vs. orbicular-ovate, 3.5–4 × 2.5–3.5 mm) (Table 1).

The two species can be distinguished by the following key:

- 1a. Plants 10–20 cm; petals obovate, rotund or truncate, glabrous; silicula ovate, 6–7 × 3–4.5 mm . . . . . *A. misirdalianum*
- 1b. Plants 7–12 cm; petals broadly spatulate, entire or subretuse, with sparse hairs on claws; silicula orbicular-ovate, 3.5–4 × 2.5–3.5 mm . . . *A. corningii*

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